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PATENT



SPECIFICATION

*Application Date, Feb. 19, 1919. No. 4128 19.*

*Complete Accepted, Oct. 23, 1919.*

COMPLETE SPECIFICATION.

Improvements in Anodes for use in Electroplating.

I, JULIUS SCHLEDORN, of 4103, Jerome Avenue, Ozone Park, County of Queens and State of New York, United States of America, Manufacturer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to anodes of the type which comprise a foundation and a chemically pure covering of metal deposited thereon through an electrolytic process.

The object of the invention is to provide an anode of the above type in which the foundation is formed with openings of different sizes progressively smaller toward the centre.

In the accompanying drawings:

Figure 1 is a face view of the foundation of an anode showing certain features of the invention.

Figure 2 is a sectional view through Figure 1 on line 2—2.

Figure 3 is a transverse sectional view through Figure 1 on line 3—3, the same showing however a deposit of metal thereon.

Referring to the accompanying drawing by numerals, 1 indicates a lead plate having projections 2 and 3 which may be bent for forming hook members when the device is in use as an anode. The plate 1 is provided with a number of apertures 4 arranged adjacent the outer edge, a pair or rows 5 near the center and finally a central row 6. These various apertures are progressively smaller from the outer edge to the center because in plating the base or core 1 with copper, nickel, silver, zinc or other metal the deposit will be faster in the outer holes 4, less fast at the next row of apertures 5 and slowest in the centre. These various apertures are, therefore, made of proper size to accommodate the speed of the deposit and may be of any desired shape. The rate of discharge of metal when used in the plating bath is the same as the rate of deposit, namely the discharge of the metal is faster adjacent the apertures 4 than apertures 6 so that the entire covering is removed or applied substantially evenly throughout. Preferably the plating is carried on until there is only a small opening in the various apertures 4, 5 and 6 in order that the discharge of the metal in the plating bath may be accelerated by the passage of fluid through these openings. The core of lead 1 may be of any thickness, preferably comparatively thin and the copper plated thereon may be of any thickness. After the anode has been used until all, or substantially all, of the copper has been removed it is placed in a plating bath and a new deposit of copper or other metal placed thereon to the desired thickness and which causes it to be again in condition for use.

[Price 6d.]

This process of producing an anode presents a finished article which is comparatively strong and which provides a pure metal whether the same is copper, silver, nickel or other metal. Preferably the base 1 is made from lead, but if desired it could be made from a non-conductive substance metalized in order to take the deposit, but lead is preferable as it is a conductor and is not affected by an acid copper solution. 5

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. An anode for electro-plating comprising a lead base having a plurality of 10 apertures therein, the apertures near the edges being larger than near the center, and an electrically deposited coating of metal arranged on said base and in said apertures, the deposit being the greatest adjacent the outer apertures.

2. An anode for plating comprising a lead base having an electric deposit of 15 pure copper on the base, said base being formed with a plurality of apertures, the apertures near the edge being larger and progressively smaller toward the center whereby said deposit will be thicker near the edges and in the larger apertures and will discharge from the edges and larger apertures at a faster rate than near the center. 20

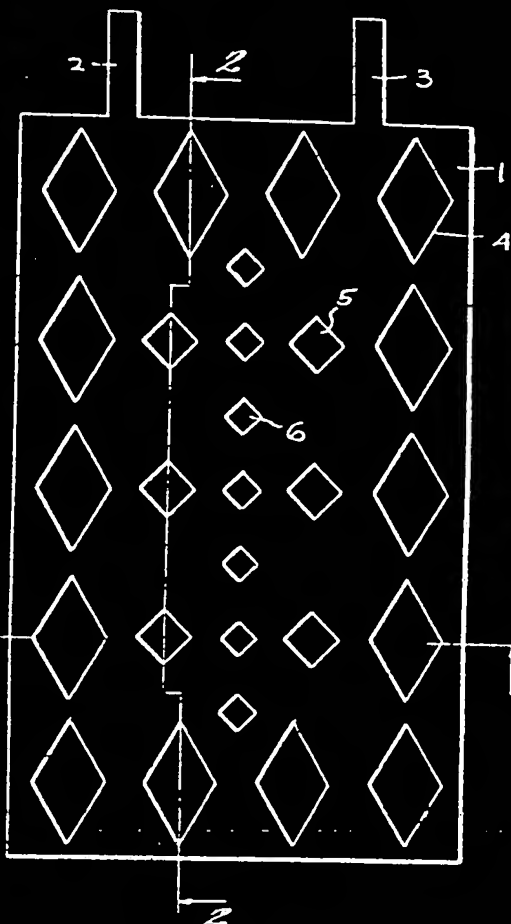
3. An anode for electro-plating comprising a lead base, and a coating of copper thereon, said copper and said base having a plurality of registering apertures whereby the plating solution may freely circulate.

Dated this 19th day of February, 1919.

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*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

